



Minnesota Pollution Control Agency

520 Lafayette Road, Saint Paul, Minnesota 55155-3898

Telephone (612) 296-6300

March 28, 1991

US EPA RECORDS CENTER REGION 5



Mr. William Taylor
General Mills, Inc.
P.O. Box 1113
Minneapolis, Minnesota 55440

Dear Mr. Taylor:

Staff at the Minnesota Pollution Control Agency (MPCA) have reviewed Barr Engineering's 1990 Annual Monitoring Report for the General Mills East Hennepin Avenue site. The report is hereby approved.

The MPCA staff has several recommendations for improving future versions of the report. Most of these are detailed in the enclosed memorandum from MPCA Hydrogeologist Fred Campbell to myself. In addition to these comments, I add the following points.

First, we have no record of General Mills or Barr Engineering contacting the MPCA to advise us that some of the required water level and water quality data could not be collected in May of 1990 due to site access difficulties. Had the MPCA been notified of this problem, our statutory authority would have allowed us to enter the site to do the sampling on your behalf, or to provide you with the access you needed to do the sampling.

The monitoring plan for this site is a significant component of your remedial efforts. Please take the necessary steps to insure that the required sampling is performed as scheduled. If you have problems, please let us know as soon as possible. We are here to help you any way we can. Unauthorized deviations from approved monitoring plans can result in the issuance of a Notice of Violation.

Secondly, some alteration in the format of the report would be appreciated. As in the past, this year's version provides all tables and figures in the rear of the document. This necessitates a continual flipping back and forth through the report during our review to determine if data in the tables and figures support what is being said in the text. We would much prefer that the salient tables and figures immediately follow the text pages where the data they contain are discussed.

Thirdly, potentiometric surface maps for the Carimona aquifer were not provided. We assume this is due to the "flat" nature of the Carimona, and the dominant pumpout well feature. Nevertheless, it would have been helpful if the reason(s) these maps were not included was explicitly stated.

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Finally, as you may be aware, CH2M Hill has been routinely evaluating the performance of pump-and-treat systems like the one at the General Mills East Hennepin Avenue site. Their review of the effectiveness of the General Mills system is considerably less flattering than yours. We mention this only so you are aware that a significant difference of opinion exists.

If you have any questions, I can be reached at 296-7776.

Sincerely,



Mark D.C. Schmitt, Ph.D.
Project Manager
Responsible Party Unit I
Site Response Section
Ground Water and Solid Waste Division

MDCS:pk

Enclosure

cc: Tom Alcamo, U.S. Environmental Protection Agency
Peter Sabee, Barr Engineering

DEPARTMENT : POLLUTION CONTROL AGENCY

STATE OF MINNESOTA

Office Memorandum

DATE : March 6, 1991

TO : Mark D.C. Schmitt, Ph.D.
Site Response Section
Ground Water and Solid Waste DivisionFROM : Frederick K. Campbell *FKC*
Site Response Section
Ground Water and Solid Waste Division

PHONE : 297-1799

SUBJECT : 1990 ANNUAL REPORT FOR GENERAL MILLS SITE

I have reviewed the General Mills 1990 Annual Report prepared by Barr Engineering Company. My comments, which follow, are listed by page number in sequence.

- Page 2, paragraph 3, line 4. The text refers to the total volume of ground water removed from the glacial drift aquifer, however, the "total volume of 31 million gallons" was removed by the site pump out wells (109 and 110). As the next paragraph explains (albeit indirectly), the downgradient pump out wells recovered an additional 142 million gallons of ground water from the glacial drift aquifer. These figures are confusing at first and the text could have clarified this distinction.
- Page 3, paragraphs 2-7 and page 4, paragraphs 1-2. Barr should be commended for providing excellent documentation of system maintenance and downtime.
- Page 6, paragraph 1. This paragraph discusses the effectiveness of the pump out systems in the glacial draft aquifer. It is unclear, however, that containment of contaminated ground water (i.e. greater than 270 ug/l VOCs) is effective. It is also unclear that the capture zone has been maintained. Barr could elaborate on this interpretation to make it clearer to the reader.
- Page 6, paragraph 3. The text refers to the "essentially flat" potentiometric surface elevation of the Carimona Member aquifer. Figure 9, however, indicates a much lower (approximately 3 feet lower) elevation in well SS. No explanation for this anomalous value is provided.
- Page 8, paragraph 2. The historical water quality data for the glacial drift aquifer shown on Figure 24 are variable. The TCE levels in wells 3 and S show little overall decrease, but exhibit (seasonal?) fluctuations. Other downgradient wells (e.g. 4 and R) show noticeable

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net decreases in TCE levels and little fluctuation. These types of observations could be used to support the interpretations given for the glacial drift aquifer on page 11 (see comment below).

- Page 9, paragraph 3. There is no figure which shows the historical TCE or VOC levels for the St. Peter wells. This information is given in Table C-9 but it would be helpful to have a graph similar to that given for the other aquifers.
- Page 11, paragraph 2. The text suggests that the downgradient pump out system is "capturing" glacial drift ground water containing TCE levels above 270 mg/l. Based on my comments above, "intercepting" might be preferable to "capturing". In addition, the statement that "the site glacial drift pump out system remains an effective control for the containment of the ground water contaminants located in the vicinity of the site" should be explained, qualified or supported since the raw data may not be sufficient.
- Page 12, paragraph 2. The discussion of the Magnolia Member water quality data should be qualified by indicating that the monitoring well network is small in number and biased towards the upgradient wells. Well TT is the only downgradient well in the Magnolia!
- Page 14, paragraph 2. Again the capture zone and containment of contaminated ground water in the glacial drift aquifer are mentioned but not explained or proven.
- Appendix B, page B-2. The monitoring program for the Magnolia Member seems to concentrate on the upgradient wells. Perhaps downgradient Well TT should be sampled during the fourth quarter.
- Appendix B, page B-3. The proposal for monitoring the Prairie du Chien aquifer via the Henkel well is reasonable given the access problems at the property.

FKC:pk